

### ABSTRACT OF THE DISCLOSURE

The present invention provides delivery systems for and methods of delivering conduction protein genetic material to cardiac cells in localized areas of the heart to improve the conductance therein. More specifically, there is provided a system and method for delivering connexin proteins or nucleic acid molecules encoding connexin proteins to a site in the heart which has been determined by mapping procedures to have a conduction disturbance. For cases where conduction is impaired, selected genetic material is delivered to cells around the disturbance area, in order to enhance overall conductivity patterns; in other cases, genetic material is selected to slow conduction in affected areas, so as to prevent, e.g., brady-tachy syndrome.

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